=> b reg;d que sta 17
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STRUCTURE FILE UPDATES: 1 MAY 2008 HIGHEST RN 1018897-91-0 DICTIONARY FILE UPDATES: 1 MAY 2008 HIGHEST RN 1018897-91-0

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http://www.cas.org/support/stngen/stndoc/properties.html

VAR G1=AK/ID VAR G2=O/S NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED ECOUNT IS E2 N AT 6

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE L7 73 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 2115 ITERATIONS SEARCH TIME: 00.00.01

73 ANSWERS

=> b hcap FILE 'HCAPLUS' ENTERED AT 13:20:45 ON 02 MAY 2008 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitrn fhitstr 110 tot

## 10 / 568433

AN		2005:182646 HCAPLUS																		
DN		142:280227																		
IN		Preparation of hydroxamates as matrix metalloproteinase inhibitors Pain, Gilles; Davies, Stephen John; Bombrun, Agnes																		
PA		Vernalis Oxford Limited, UK; Laboratoires Serono S.A.																		
SO		PCT Int. Appl., 89 pp.																		
SU	'	CODEN: PIXXD2																		
DT		Patent	FLAN	D2																
LA		English																		
	AN.CNT 1																			
		PATENT NO.									APPL	ICAT	ION :	DATE						
PI		WO2005019194				A1 20050303				2004W0-GB0003558						20040818				
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		EP1660471				A1 20060531			2004EP-000768117 GB, GR, IT, LI, LU,						20040818					
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		NO200								2006										
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	US-20060281920					A1 20061214								20060808						
PR	AI	AI 2003GB-000019917				A			0823		2000	00 0	0000	0433		-	0000			
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		2004WO-	GB00	0355	8	W		2004	0818											
os		CASREACT 142:280227; MARPAT 142:280227																		
GT																				

L10 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN

Title compds. I [wherein Ar = (un)substituted (heterolaryl or (heterolcycloalkyl; R = H or (cyclo)alkyl; Alk = alkylene or alkenylene; R1 and R2 link together to form (un)substituted heterocycloalkyl rings which is optionally fused to (un)substituted (heterolcycloalkyl rings; and enantioners, diasterocisomers, salts, hydrates or solvates thereof) were prepared as inhibitors of natrix metalloproteinases. For example, II was synthesized starting from (25)-Hydroxysuccinic acid disopropyl ester in several steps, which showed inhibitory activity against MEP-3, MEP-1 and MEP-12 with ICSO values of 400 nM, 1000 nM, 31000 nM, 1000 nM, 100 nM, 1000 nM,

(uses) (inhibitor; prepn. of hydroxamates as MMP inhibitors) 847039-40-1P

847039-40-1P
RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(Peactant or reagent)
(Preparation of hydroxamates as MMP inhibitors)
(847037-74-5P, 6-(4-8thoxyphenyl)-(25)-hydroxy-(3R)-[14-(3-methoxyphenyl)-1ylearboxyllpheanoic acid hydroxyamide
RL: PNC (Pharmacological activity); SPN (Synthetic preparation); THU (Cherapeutic use); SDN (Biological study); PNEP (Preparation); USES

(Uses)
(inhibitor; preparation of hydroxamates as MMP inhibitors)
847037-74-5 MCAPUS
1-Piperatinebutanamide, β-[3-(4-ethoxyphenyl)propyl]-N, αdihydroxy-4-(3-methoxyphenyl)-γ-οxο-, (ας, βR)- (CA INDEX
NAME)

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 7

110 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)
resp. II also showed 574 inhibition of IL2-induced peritoneal recruitment of lymphocytes at the dose of 3 mg/kg (vs. 764 inhibition by dexamethasione at the dose of 1 mg/kg). In general, I are selective inhibitions of MBM-12 and the dose of 1 mg/kg). In general, I are selective inhibitions of MBM-12 apharmaceutical compns. thereof are useful in the treatment or prophylaris of diseases or conditions primarily mediated by MBM-12 and/or MBM-3, esp. inflammatory conditions, such as multiple selerosis and fibrosis.
113 817037-74-59, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-yended and selective inflammatory conditions, such as multiple selerosis and fibrosis.
113 817037-74-59, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-yended at 817037-76-99, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-yended at 817037-76-99, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-[14-4]-yended at 817037-78-99, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-[14-4]-yelded at 817037-78-99, 6-(4-Ekhoxyphenyl)-(25)-hydroxy-(2R)-[14-4]-yelded at 917-99-19, 6-(4-Ekhoxyphenyl)-(25)-hydroxyphexanoic acid hydroxyamide 847037-8-99-19, 6-(4-Ekhoxyphenyl)-(25)-hydroxyphexanoic acid hydroxyamide 847037-94-99-19, 6-(4-Ekhoxyphenyl)-(25)-hydroxyphexanoic acid hydroxyamide 847037-94-19, 6-(4-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide 847037-94-19, 6-(4-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide 847037-94-19, 6-(4-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide 847038-04-49, 6-(4-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide 847038-03-9-8-89, 6-(3-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide 847038-03-9-8-80, 6-(4-Ekhoxyphenyl)-(28)-hydroxyphexanoic acid hydroxyamide

=> d bib abs hitstr l11 tot

AN DN TI

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS ON STN
2006:101557 HCAPLUS
144:171021
Preparation of piperazine and related N-hydroxy succinic acid diamide
derivatives as metalloproteinase inhibitors with therapeutic uses
Swinnen, Dominique; Bondruh, Agnes; Gonzalez, Jerome; Crosignani, Stefano;
Gerber, Patrick, Jorand-Lebrun, Catherine
Gerber, Patrach Systems Ars Holding N.V., Neth. Antilles
PCTIN: Agrach Systems Ars Holding N.V., Neth. Antilles
COORN: PIXXD2
PAtent IN

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					KIND		DATE			APPLICATION NO.					DATE			
PI	WO2006010751				A1		20060202									0050		
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	CN1989106				A	A 20070627				2005	CN-0	20050725						
	JP2008507575				T	T 20080313				2007	JP-0							
	IN-2006DN07460				A		2007	0622		2006	IN-D	N000	7460		2	0061	211	
	MX200701022				A		2007					20070125						
	US-2008	Al		2008			2007						0070					
	KR2007046873				A		2007			2007						0070		
	NO2007000994			A		2007			2007	NO-0	0000	0994		2	0070	221		
PRAI	2004EP-000103574					2004												
	2004US-00591111P						2004											
	2005EP-000100641				A		2005											
	2005US-00648924P 2005WO-EP0053616				P		2005											
	MARPAT 144:171021				W		2005	0 /25										
os	MARPAT	144:	1/10	21														
GT																		

uses) 874646-52-3 HCAPLUS 1-Piperarinebut anamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-2-methyl-y-oxo-4-(2-pyridinyl)-, ( $\alpha$ 5,  $\beta$ 5, 2R)-(CA INDEX NAME)

Absolute stereochemistry

874646-54-5 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-2-methyl- $\gamma$ -oxo-4-(2-pyridinyl)-, ( $\alpha$ 5,  $\beta$ 5, 25)- (CA INDEX NAME)

Absolute stereochemistry

874646-56-7 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-2-methyl- $\gamma$ -oxo-4-(2-pyrimidinyl)-, ( $\alpha$ 5,  $\beta$ 5, 2R)-( $\alpha$ 7 INDEX NAME)

Absolute stereochemistry.

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

B The present invention is related to piperarine and related N-hydroxy succinic acid diamide derivs. (shown as I; variables defined below; e.g. (28,35)-N-hydroxy-2-hydroxy-5-methyl-3-[[4-(2-pyridinyl)-1-piperarinyl(carboxyl)Hexanamide (shown as II) and use thereof, in particular for the treatment and/or prophylaxis of autoimmune disorders, inflammatory debress, cardiovastical disease the providence of the control of the c

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN

874646-58-9 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-4-(2-fluorophenyl)-N, $\alpha$ -dihydroxy-2-methyl- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ S, 2R)- (CA INDEX NAME)

874646-79-4 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-4-(4-fluorophenyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-82-9 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-4-[5-(trifluoromethyl)-2-pyridinyl)-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

RN 874646-85-2 HCAPLUS CN 1-Piperazinebutanamide, 4-(5-cyano-2-pyridinyl)- $\beta$ -[3-(4-

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued) ethoxyphenyl)propyl)-N,a-dihydroxy-y-oxo-, (aS, BR)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874646-86-3 HCAPLUS CN 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-4-(6-methyl-2-pyridinyl)- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry

RN 874646-87-4 HCAPLUS CN 1-Piperarinebutanamide, 4-(6-chloro-2-pyridinyl)- $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874646-88-5 HCAPLUS CN 1-Piperarinebutanamide, 4-(5-chloro-2-pyridinyl)- $\beta$ -(3-(4-chlory)phenyl)propyl]-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 874646-94-3 HCAPLUS
CN 1-Piperarinebutanamide, \$\beta=(4-\text{ethoxyphenyl})\text{propyl}-\text{N}, \$\alpha\$-\dilydroxy-\cox-\dilydrox-\dilydrox-\dilydrox\dilydr

Absolute stereochemistry.

RN 874646-95-4 HCAPLUS 1-Piperarinebutanamide, 4-(3,5-dichloro-4-pyridinyl)- $\beta$ -[3-(4-ethoxyphenyl)propyl]- $\aleph$ ,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NOWE)

Absolute stereochemistry.

RN 874646-96-5 HCAPLUS CN 1-Ptperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-4-(2-methoxyphenyl)- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 874646-89-6 HCAPLUS CN 1-Piperarinebut anamide, 4-(4-chloro-2-fluorophenyl)- $\beta$ -[3-(4-ehoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-92-1 HCAPLUS 1-Piperazinebutanantde, 4-(2-chlorophenyl)- $\beta$ -(3-(4-ethoxyphenyl)propyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ 8)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874646-93-2 HCAPLUS
CN 1-Piperarinebutanamide, β-[3-(4-ethoxyphenyl)propyl]-N, α-dinydroxy-4-[6-methyl.2-(trifluoromethyl)-4-quinolinyl]-γ-οxο-, (αS, βR) - (CA INDEX NAME)

Absolute stereochemistry.

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Co

RN 874646-97-6 HCAPLUS CN 1-Piperatinebutanamide, 4-(4-chlorophenyl)- $\beta$ -[3-(4-ethoxyphenyl)propyl]- $\beta$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874646-98-7 HCAPLUS CN 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-y-oxo-4-(2-pyrazinyl)-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874646-99-8 HCAPLUS
CN 1-Piperarinebutananide, β-[3-(4-ethoxyphenyl)propyl]-N, α-dihydroxy-4-[2-(4-morpholinyl)ethyl]-γ-οxο-, (α5, βR)-(CA INDEX NAME)

Absolute stereochemistry.

RN 874647-00-4 HCAPLUS CN 1-Piperazinebutanamide, 4-(2-cyanophenyl)- $\beta$ -[3-(4-ethoxyphenyl)p-ropyl]- $\eta$ ,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

02/05/2008 Page 6

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

874647-01-5 HCAPLUS 1-Piperazinebutanamide, 4-(2-fluorophenyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo- $\beta$ -[3-[4-(trifluoromethoxy)phenyl)propyl]-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874647-02-6 HCAPLUS 1-Piperazinebutanande, 4-(6-chloro-2-pyridinyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo- $\beta$ -[3-[4-(trifluoromethoxy)phenyl]propyl]-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME) RN CN

874647-04-8 HCAPLUS l-Piperarinebutanamide, N. $\alpha$ -dihydroxy- $\gamma$ -oxo-4-{2-pyridinyl}- $\beta$ -[3-[4-(trifluoromethoxy)phenyl]propyl]-, (QS,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued) 1-Piperarinebutanamide, N,  $\alpha$ -dihydroxy-y-oxo- $\beta$ -(phenylmethyl)-4-[4-(trifluoromethoxy)phenyl]-, ( $\alpha$ R,  $\beta$ S)- (CA INDEX NAMES)

Absolute stereochemistry.

874647-55-9 HCAPLUS
1-Piperarinebutanamide, N,α-dihydroxy-2-methyl-γ-oxo-β-(phenylmethyl)-4-[4-(trifluoromethoxy)phenyl]-, (αS,βS,2R)-(CA INDEX NAME)

Absolute stereochemistry.

874647-73-1 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -(cyclopentylmethyl)-N,  $\alpha$ -dihydroxy-2-methyl-y-co-4-[4-(trifluoromethoxy)phenyl]-, ( $\alpha$ 5,  $\beta$ 8, 2R)- (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 3

L11 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

874647-15-1 HCAPLUS 2,5-Diazabicyclo[2.2.1]heptane-2-butanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-5-(4-fluorophenyl)-N, $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S, $\beta$ R,1S,4S)- (CA INDEX NAME)

Absolute stereochemistry.

874647-38-8 HCAPLUS 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -divided by  $\beta$ -(2-(2-thienyl)ethyl]-, (GS,  $\beta$ R)- (CA INDEX NAME)

874647-40-2 HCAPLUS 1-Piperazinebutanamide, 4-cyclohexyl- $\beta$ -[3-(4-ethoxyphenyl)propyl]- $N,\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

RN 874647-54-8 HCAPLUS

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FILE 'USPATFULL' ENTERED AT 13:21:22 ON 02 MAY 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPATOLD' ENTERED AT 13:21:22 ON 02 MAY 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 13:21:22 ON 02 MAY 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

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ANSWER 1 OF 1 USPATFULL on STN
2006;328715 USPATFULL
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2006;238715 U

        corporation
        Al 20061214

        200642920
        Al 20061214

        2004405-000568433
        Al 20040918 (10)

        2004806-00005955
        20040918

        2005090
        PCT 371 date

        2003GB-000019917
        2003020

        2003Teb-00028632
        20031210

        Utility
        2003CD-00012917

PI
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PRAI
                                                                                 2003GB-000028632 20031210
Utility
APPLICATION
BANNER & WITCOFF, 1001 G STREET N W, SUITE 1100, WASHINGTON, DC, 20001,
   FS
LREP
                                                                          US
Number of Claims: 30
Exemplary Claim: 1
No Drawings
CLMN
ECL
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No Drawings

No Drawings

2027

IBEXING IS AVAILABLE FOR THIS PAIENT.

Compounds of formula (I) are inhibitors of matrix metalloproteinases, and are of use in the treatment of, for exemple fibrotic disease, and are of use in the treatment of, for exemple fibrotic disease, and are of use in the treatment of, for exemple fibrotic disease, multiple sclerosis, emphysenia, bronchitis and asthmat formula (I) which is a constant of the constant of t

where R.sub.3 is C.sub.1-C.sub.3 alkyl. #85R7##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

#81037-4-59, 6-(4-Ethoxyphenyl.-(25)-hydroxy-(3R)-[4-(3-methoxyphenyl)]piperatin-1-yl]carbonyl hevanoic acid hydroxyanide

#87037-78-99, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(4-qyanide

#87037-78-99, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(pyridin-2-yl)piperatin-1-yl]carbonyl)hexanoic acid hydroxyanide

#87037-78-99, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(pyridin-4-yl)piperatin-1-yl]carbonyl)hexanoic acid hydroxyanide

#87037-92-P9, (3R)-[4-(Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(pyridin-4-yl)piperatin-1-yl)carbonyl)hexanoic acid hydroxyanide

#87037-92-P9, (3R)-[4-(Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(pyridin-4-yl)nethyl)piperatin-1-yl)carbonyl)hexanoic acid hydroxyanide

#87037-94-99, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(pyridin-4-yl)nethyl)piperatin-1-yl)carbonyl)hexanoic acid hydroxyanide

#87037-98-39, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(4-(pyrindin-4-yl)nethyl)piperatin-1-yl)carbonyl)hexanoic acid hydroxyanide

#87038-98-99, 6-(4-Ethoxyphenyl)-(25)-hydroxy-(3R)-[4-(4-(pyrindin-4-yl)nethyl)piperatin-1-yl)carbonyl)hexanoic acid hydroxyanide

#87038-98-99, 6-(4-Ethoxyphenyl)-(28)-hydroxy-(3R)-[4-(4-(pyrindin-4-yl)nethoxyn-4-yl)nethoxyn-4-yl-paratin-1-yl-

ANSWER 1 OF 1 USPATFULL on STN (Continued) 847037-74-5 USPATFULL 1-Piperatinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-4-(3-methoxyphenyl)-7-oxo-, ( $\alpha$ 5,  $\beta$ R)- (CA

Absolute stereochemistry.

=> d bib abs hitstr 114 tot

Answer 1 OF 1 USPATFULL ON STN
2008:23847 USPATFULL
N-Hydroxyamide Derivatives and Use Thereof
Swinnen, Dominique, Beamons, FRANCE
Swinnen, Dominique, Beamons, FRANCE
Swinnen, Dominique, Beamons, FRANCE
Graffan, Stefano, St. Genis-Poullly, FRANCE
Groffanni, Stefano, St. Genis-Poullly, FRANCE
Gerber, Patrick, Etoy, SWITIERHAND
JORAND-Lebbrum, Catherine, Contamine-Sarrin, FRANCE
Applied Research Systems ARS Holding N.V., Curacao, NETHERLANDS
(non-U.S. corporation)
US-20080021028 Al 20080725
2005US-0087266 Al 20080725
2005US-0087266 2005US-00103574
2005US 200403-000548924 20050201 (60)

201 TULL-100006489249 20050201 (60)
FS APPLICATION
LREP OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C., 1940 DUKE STREET,
ALEXANDRIA, VA, 22314, US

CLON Number of Claims :38
ECL Exemplary Claim: 1

LINCH 5388
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is related to N-hydroxyamide derivatives of
Formula (I) and use thereof, in particular for the treatment and/or
prophylaxis of autoinmune disorders, inflammatory disease, respiratory
cardiovascular diseases, neurodegenerative diseases, cancer, respiratory
emphysema, chronic obstructive pulmonary disease, liver and pulmonary
fibrosis. ##STRI## emphysema, chronic obstructive pulmonary disease, liver and pulmonary fibrosis. ##STRI##

CAS INDEXING IS AVAILABLE FOR THIS DATENT.

IT 87866-56-3P. (26.3) 8.16-6(-8-thoryphenyl)-N-hydroxy-2-hydroxy-3[((28)-2-methyl-4-(pyridin-2-yl)piperazin-1-yl)carbonyl)hexanamide
87866-65-5P. (25.3).6-6(-8-thoryphenyl)-N-hydroxy-3[((28)-2-methyl-4-(2-yyridinyl)piperazin-1-yl)carbonyl)hexanamide
87866-65-5P. (25.3).6-6(-8-thoryphenyl)-N-hydroxy-3[((28)-2-methyl-4-(2-yyridinyl)piperazin-1-yl)carbonyl)hexanamide
87866-67-9(-8).33-6-(-8-thoryphenyl)-N-hydroxy-2hydroxyhexanamide 878666-79-4P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-82-9P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-82-9P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-82-9P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-82-9P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-83-P. (25.3)R)-6-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-83-P. (25.3)R)-3-[(4-(4-Ethoxyphenyl)-N-hydroxy-2hydroxyhexanamide 878666-83-P. (25.3)R)-3-[(4-(4-Ethoxyphenyl)-

ANSWER 1 OF 1 USPATFULL on STN (Continued) 1-Piperarinebutanamide,  $\beta$ =[3-(4-ethoxyphenyl)propyl)-N, a-dihydroxy-2-methyl- $\gamma$ -oxo-4-(2-pyrimidinyl)-, (QS,  $\beta$ S, 2R)-(CA INDEX NAME)

Absolute stereochemistry

874646-58-9 USPATFULL 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-4-(2-fluorophenyl)-N, a-thydroxy-2-methyl- $\gamma$ -oxo-, (as,  $\beta$ s, 2R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-79-4 USPATFULL 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-4-(4-fluorophenyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R) (CA INDEX NAME)

Absolute stereochemistry.

874646-82-9 USPATFULL 1-Piperazinebutanamide,  $\beta$ =[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-4-(5-(trifluoromethyl)-2-pyridinyl]-, ( $\alpha$ 5,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

L14 ANSMER 1 OF 1 USPATFULL on STN (Continues)

Pl carbonyl 1-6-(4-ethocyphenyl).N-hydrony-2-hydroxyhavanani.de

871664-98-79, (26, 3N, 4-ci.ethocyphenyl).N-hydrony-2-hydroxy-3[14-(2yrazin-2-y)]piperarin-1-yl]carbonyl]hestananide 87664-99-89

(28, 3N)-6-(4-Ethoxyphenyl).N-hydroxy-2-hydroxy-3-[14-[2-(morpholin-4yl) ethyl]piperarin-1-yl]carbonyl]hestananide 87664-70-99

(28, 3N)-3-[14-(2-Cyanophenyl)piperarin-1-yl]carbonyl]-6-(4-ethoxyphenyl)N-hydroxy-2-hydroxy-3-[14-[2-fluorophenyl]piperarin-1-yl]carbonyl]-8-hydroxy-2
(28, 3N)-3-[14-(2-fluorophenyl)piperarin-1-yl]carbonyl]-8-hydroxy-2
hydroxy-2-hydroxy-3-[14-(2-fluorophenyl)piperarin-1-yl]carbonyl]-1-hydroxy-2
hydroxy-6-[4-(crifluoromethoxy)phenyl]hexananide 87647-03-89,
(28, 3N)-3-[14-(6-Chlorophyridin-2-yl)piperarin-1-yl]carbonyl]-6-[4-(trifluoromethoxy)phenyl]hexananide 874647-03-89,
(28, 3N)-6-(4-Ethoxyphenyl)-3-[16, 45)-5-(4-fluorophenyl)-2-5
diarablcyclo[2.2.1]hept-2-yl]carbonyl]-8-hydroxy-2-hydroxyhexananide
874647-03-89, (28, 3N)-6-(4-Ethoxyphenyl)-8-hydroxy-2-hydroxyhexananide
874647-03-29, (28, 3N)-3-[4-Cyclohexylpiperarin-1-yl]carbonyl]-6
(4-ethoxyphenyl)-8-hydroxy-2-hydroxyhexananide 874647-55-99

(28, 35)-3-Benyl-N-hydroxy-2-hydroxyhexananide 874647-55-99

(28, 35)-3-Benyl-N-hydroxy-2-hydroxy-4-(2(N)-2-methyl-4-14
ctrifluoromethoxyl phenyl piperarin-1-yl]brearin-1-yl]carbonyl-4
ctrifluoromethoxyl phenyl piperarin-1-yl]brearin-1-yl]-6
87647-73-19, (28, 38)-3-(cyclopenyl-1-6-hydroxy-2-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yl]-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yl]-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yl]-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yl]-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yll-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yll-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yll-1-6-hydroxy-2-hydroxy-4
ctrifluoromethoxyl phenyl piperarin-1-yll-1-6-hydroxy-2-hyd (drug candidate; prepn. of piperazine and related N-hydroxy succinic acid diamide derivs. as metalloproteinase inhibitors with therapeutic

acid diamide derivs. as metalloproteinase inhibitors w uses)

874646-52-3 USPATFULL

CN 1-Piperatinebutanamide, β-[3-(4-ethoxyphenyl)propyl]-N, 2-dinydroxy-2-metnyl-y-oxo-4-(2-pyridinyl)-, (as, βs, 2R)-(CA INDEX NAME)

Absolute stereochemistry.

874646-54-5 USPATFULL 1-Piperazinebutanamide,  $\beta$ =[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-2-methyl- $\gamma$ -oxo-4-(2-pyridinyl)-, ( $\alpha$ S,  $\beta$ S, 2S)-(CA INDEX NAME)

Absolute stereochemistry.

RN 874646-56-7 USPATFULL

L14 ANSWER 1 OF 1 USPATFULL on SIN

874646-85-2 USPATFULL
1-Plperarinebutanamide, 4-(5-cyano-2-pyridinyl)-β-{3-(4-ethoxyphenyl)propyl}-N, α-dihydroxy-γ-oxo-, (αδ, ЯR)- (CA INDEX NAME)

Absolute stereochemistry.

874646-86-3 USPATFULL 1-Piperarinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-4-(6-methyl-2-pyridinyl)- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-87-4 USPATFULL 1-Piperazinebutanamide, 4-(6-chloro-2-pyridinyl)- $\beta$ -[3-(4-ethoxyphenyl)propyl)- $N_c$ a-dihydroxy- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

ANSWER 1 OF 1 USPATFULL on STN (Continued) 874646-88-5 USPATFULL  $1-P! perazine but anamide, 4-(5-chloro-2-pyridiny1)-\beta-(3-(4-chloroypheny1)propy1)-N.a-dhydroxy-y-oxo-, (os. <math>\beta R)$ - (CA TIOEX MURE)

Absolute stereochemistry.

874646-89-6 USPATFULL 1-Piperarinebutanamide, 4-(4-chloro-2-fluorophenyl)- $\beta$ -[3-(4-ethoxyphenyl)-proyl]-N, 8-dihydroxy- $\gamma$ -oxo-, (45,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-92-1 USPATFULL
1-Piperarinebutanamide, 4-(2-chlorophenyl)-β-[3-(4-ethoxyphenyl)propyl)-N, α-dihydroxy-γ-οxο-, (σ.ς, βR)- (CA INDEX NAME)

Absolute stereochemistry.

874646-93-2 USPATFULL 1-Piperazinebutanamide,  $\beta_{-[3-(4-ethoxyphenyl)propyl]-N, \alpha-dihydroxy-4-(6-methyl-2-(trifluoromethyl)-4-quinolinyl)-\gamma-oxo-, (05, <math>\beta_R$ ) (CA INDEX NAME)

Absolute stereochemistry.

L14 ANSWER 1 OF 1 USPATFULL on STN

874646-97-6 USPATFULL
1-Piperazinebutanamide, 4-(4-chlorophenyl)-β-[3-(4-ethoxyphenyl)propyl)-N, α-dihydroxy-γ-οxο-, (ας, βR)- (CA INDEX NAME)

Absolute stereochemistry.

874646-98-7 USPATFULL
1-Piperazinebutanamide, β-[3-(4-ethoxyphenyl)propyl]-N, α-dinydroxy-γ-οxo-4-(2-pyrazinyl)-, (α5, βR)- (CA INDEX NAME)

Absolute stereochemistry.

874646-99-8 USPATFULL 1-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-4-[2-(4-morpholinyl)ethyl]- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

874647-00-4 USPATFULL 1-Piperazinebutanamide, 4-(2-cyanophenyl)- $\beta$ -[3-(4-ethoxyphenyl)-proyl]-N, a-dihydroxy- $\gamma$ -oxo-, (as,  $\beta$ R}- (CA INDEX NAME)

L14 ANSWER 1 OF 1 USPATFULL on STN

(Continued)

874646-94-3 USPATFULL 1-Piperatinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-y-oxo-4-[3-(trifluoromethyl)-2-pyridinyl]-, (cs,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874646-95-4 USPATFULL 1-Piperazinebutanamide, 4-(3,5-dichloro-4-pyridinyl)- $\beta$ -[3-(4-ethoxyphenyl)propyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, ( $\alpha S$ ,  $\beta R$ )- (CA INDEX NAME)

Absolute stereochemistry.

874646-96-5 USPATFULL l-Piperazinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -dihydroxy-6-(2-methoxyphenyl)- $\gamma$ -oxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

L14 ANSWER 1 OF 1 USPATFULL on STN

Absolute stereochemistry.

874647-01-5 USPATFULL 1-Piperazinebutannide, 4-(2-fluorophenyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo- $\beta$ -[3-[4-(trifluoromethoxy)phenyl]propyl)-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874647-02-6 USPATFULL
CN 1-Piperarinebutanamide, 4-(6-chloro-2-pyridinyl)-N,α-dihydroxyγ-αxo-β-[3-[4-(trifluoromethoxy)phenyl]propyl]-,
(αs,βR)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874647-04-8 USPATFULL
CN 1-Plperatinebutanamide, N,α-dihydroxy-γ-οxο-4-(2-pyridinyl)-β-[3-(4-(trifluoromethoxy)phenyl)propyl)-, (αS,βR)- (CA INDEX NAME)

Absolute stereochemistry.

L14 ANSWER 1 OF 1 USPATFULL on STN (Continued) RN 874647-15-1 USPATFULL (Continued) R1 874647-15-1 USPATFULL (Continued) R1-13-(4-ethoxyphenyl)propyl]-5-(4-fluorophenyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -oxo-, (c5, Rp, I3, 43) - (CA RINGE NAME)

Absolute stereochemistry.

RN 874647-38-8 USPATFULL CN 1-Piperarinebutanamide,  $\beta$ -[3-(4-ethoxyphenyl)propyl]-N,  $\alpha$ -drivery-y-oxo-4-[2-(2-thienyl)ethyl]-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874647-40-2 USPATFULL CN 1-Pipersainebutananide, 4-cyclohexyl- $\beta$ -[3-(4-ethoxyphenyl)propyl)-N,  $\alpha$ -dihydroxy- $\gamma$ -cxo-, ( $\alpha$ S,  $\beta$ R)- (CA INDEX NAME)

Absolute stereochemistry.

874647-54-8 USPATFULL
1-Piperazinebut anamide, N, α-dihydroxy-γ-οxο-β(phenylmethyl)-4-[4-(trifluoromethoxy) phenyl]-, (αR, βS)- (CA
TNDEX NAME)

Absolute stereochemistry.

L14 ANSWER 1 OF 1 USPATFULL on STN (Continued)

RN 874647-55-9 USPATFULL CN 1-Piperarinebutanamide, N,  $\alpha$ -dihydroxy-2-methyl-y-oxo- $\beta$ - (phenylmethyl)-4-[4-(trifluoromethoxy) phenyl]-, ( $\alpha$ S,  $\beta$ S, 2R)- (CA INDEX NAME)

Absolute stereochemistry.

RN 874647-73-1 USPATFULL Piperarinebutanamide,  $\beta$ -(cyclopentylmethyl)-N,  $\alpha$ -dihydroxy-2-methyl- $\gamma$ -cxo-6-4 (-trifluoromethoxy)phenyl]-, ( $\alpha$ S,  $\beta$ S, 2R)- (CA INDEX NAME)

Absolute stereochemistry.

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(FILE 'HOME' ENTERED AT 13:11:49 ON 02 MAY 2008)

FILE 'HCAPLUS' ENTERED AT 13:12:14 ON 02 MAY 2008 L1 1 US20060281920 /PN

FILE 'REGISTRY' ENTERED AT 13:12:33 ON 02 MAY 2008

FILE 'HCAPLUS' ENTERED AT 13:12:33 ON 02 MAY 2008

L2 TRA L1 1- RN : 117 TERMS

FILE 'REGISTRY' ENTERED AT 13:12:33 ON 02 MAY 2008

L3 117 SEA L2

56 L3 AND NC2NC2/ES L4

L5 STR

Г6 4 L5 L7 73 L5 FULL

SAV TEM L7 J433C1GIII/A

44 L7 AND L3 L8

29 L7 NOT L8 L9

FILE 'HCAPLUS' ENTERED AT 13:18:45 ON 02 MAY 2008

1 L8 1 L9 L10

L11

FILE 'HCAOLD' ENTERED AT 13:19:27 ON 02 MAY 2008

L12 0 L7

FILE 'USPATFULL, USPATOLD, USPAT2' ENTERED AT 13:19:36 ON 02 MAY 2008

L13 1 L8

1 L9 L14